

REMARKS

Claims 1-7 are all the claims pending in the application.

I. Response to Rejections under 35 U.S.C. § 112, second paragraph

Referring to paragraph 5 of the Office Action, claims 1-7 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite.

Applicants respectfully traverse the rejection.

First, the Examiner asserts that it is not clear whether the recitation “in a surface portion of the pressure-sensitive adhesive layer within the range of up to 3 nm inward from the outer face of the pressure-sensitive adhesive layer” refers to the acrylic polymer or anionic emulsifier.

Claim 1 recites that the sulfur atom-containing anionic emulsifier (B) is present in a proportion of from 0.1 to 3 parts by weight based on 100 parts by weight of the whole of the monomer components constituting the acrylic polymer (A) that forms the surface portion of the PSA layer. Thus, one of ordinary skill in the art would understand that the recited proportion of the sulfur atom-containing anionic emulsifier refers to the relative amount in the surface portion.

Claim 1 also recites that hydrophilic polymer (C) is present in a proportion of from 0.5 to 15 parts by weight based on 100 parts by weight of non-volatile matters in the aqueous dispersion type PSA composition of the whole of the PSA layer. Thus, one of ordinary skill in the art would understand that the recited proportion of the hydrophilic refers to the relative amount in the whole PSA layer. Indeed, one of ordinary skill in the art would understand that the recitation with respect to the amount of the hydrophilic polymer can only refer to the amount of the hydrophilic polymer in the whole of the PSA layer, because the recited proportion is based on the amount of the non-volatile matters in the whole of the PSA layer.

Thus, it is respectfully submitted that the present claims are clear and definite, and that the plain meaning is not ambiguous as to what portion of the PSA layer the recited amount of the hydrophilic polymer refers to.

Further, the specification never specifically refers to the amount of hydrophilic polymer in the surface portion of the PSA layer. Instead, the specification only refers to the amount of sulfur atom-containing anionic emulsifier in the surface portion of the PSA layer. For example, the specification discloses an ESCA measurement to determine the amount of sulfur in the surface portion. Thus, the scope of the claims would have been clear and definite to one of ordinary skill in the art in light of the specification.

Second, the Examiner requests that Applicants explain how they control the proportion of the anionic emulsifier in the surface portion of the PSA layer. For example, the Examiner suggests that Applicants point out where in the specification "controlling the location of the emulsifier is disclosed."

It is respectfully submitted that Applicants have provided two Declarations (September 17, 2007 and July 13, 2007) and an in-depth explanation with drawings (November 14, 2006) that discuss how the timing of the addition of the hydrophilic polymer effects the amount of sulfur atom-containing anionic emulsifier in the surface portion of the PSA layer. *See, e.g.,* pages 3-4 of the Declaration of Mr. Tosaki filed September 17, 2007 in the section titled "Timing of the Addition of the Hydrophilic Polymer."

Furthermore, in the Amendment filed September 17, 2007, the present claims were amended to expressly recite that "the hydrophilic polymer is added as aqueous solution after the polymerization of the acrylic polymer." As support for this amendment, Applicants pointed to the paragraph bridging pages 29-30 of the specification, which expressly discloses that "in order that the polymerization of the acrylic polymer (A) may not be adversely affected, it is

preferable to contain the hydrophilic polymer (C) in the aqueous dispersion type pressure-sensitive adhesive composition by adding it as an aqueous solution after the polymerization of the acrylic polymer (A)."

Accordingly, it is respectfully submitted that a technical analysis as to why the timing of the addition of the hydrophilic polymer affects the relative amount of the sulfur atom-containing emulsifier in the surface portion of the PSA layer has been provided.

Therefore, it is respectfully submitted that the present claims are clear and definite and are fully supported by the originally filed specification.

It is further submitted that evidence and arguments directed to advantages not disclosed in the specification cannot be disregarded. See MPEP § 716.02(f) citing *In re Chu*, 66 F.3d 292, 298-99 (Fed. Cir. 1995) (holding that "Although the purported advantage of placement of a selective catalytic reduction catalyst in the bag retainer of an apparatus for controlling emissions was not disclosed in the specification, evidence and arguments rebutting the conclusion that such placement was a matter of 'design choice' should have been considered as part of the totality of the record").

Similarly, section 716.02(f) of the MPEP states that the specification need not disclose proportions or values as critical for applicants to present evidence showing the proportions or values to be critical. See MPEP § 716.02(f) citing *In re Saunders*, 444 F.2d 599, 607, 170 USPQ 213, 220 (CCPA 1971).

In view of the above, withdrawal of the rejections is respectfully requested.

II. Response to Rejections under 35 U.S.C. § 102 and § 103

(1) Referring to paragraph 6 of the Office Action, claims 1-4, 6 and 7 are rejected under 35 U.S.C. § 103(a) as allegedly obvious over Coopridier et al. (US 5,571,617).

Applicants respectfully traverse the rejection.

First, the Examiner takes the position that because Cooprider discloses that the PSA composition has very little coagulum (see column 9, line 46), a finely dispersed PSA composition is allegedly formed. Thus, the Examiner asserts that the relative amount of anionic emulsifier in the surface portion of the PSA layer of Cooprider would be within the scope of the recited proportion of anionic emulsifier in the surface portion of the PSA layer of the present claims.

Applicants respectfully disagree.

It is respectfully submitted that evidence that rebuts the Examiner's position has been submitted. For example, in the Declaration filed July 13, 2007, the results clearly demonstrated that the amount of anionic emulsifier in the thickness direction of the PSA layer of Cooprider was NOT uniform, because the amount of anionic emulsifier in the surface portion of the PSA layer was much greater than the amount of anionic emulsifier in the whole of the PSA layer.

Second, the Examiner acknowledges that the recitation "wherein the hydrophilic polymer is added as an aqueous solution after the polymerization of the acrylic polymer" is a product-by-process limitation. See the paragraph bridging pages 5-6 of the Office Action. Further, the Examiner correctly indicates that the patentability of a product-by-process claim is determined by the patentability of the resulting product. In this regard, the Examiner states there is "no factual evidence on the record that demonstrates that the aforementioned process step materially affects the structure and/or chemistry of the final product."

Applicants respectfully disagree with the Examiner's statement that there is "no factual evidence on the record."

As mentioned above, the record already contains two Declarations (September 17, 2007 and July 13, 2007) by one of ordinary skill in the art which expressly state how the recited process step affects the structure of the PSA. These Declarations also include experimental data that demonstrates how the process step affects the structure of the PSA. In particular, the

data shows that the process of Coopriider results in a structure that is outside of the scope of the present claims. Furthermore, the explanation with drawings submitted November 14, 2006 provides an in-depth technical discussion of how the recited process step affects the structure of the PSA. In addition, the Declaration submitted November 21, 2005 also established how the process step (which was not claimed at that time) distinguishes the structure of the recited PSA. In that Declaration, the evidence showed that the PSA according to Examples 44 and 46 of U.S. Patent No. 6,103,316 was well outside of the scope of the present claims.

(2) Referring to paragraph 7 of the Office Action, claims 1-4, 6 and 7 are rejected under 35 U.S.C. § 102(a) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over EP 1340797 ("Tosaki").

Applicants respectfully traverse the rejection.

Without acquiescing the merits of the rejection, it is respectfully submitted that Tosaki was published on September 3, 2008, which is after the priority date of November 8, 2002, for the present application.

Therefore, Applicant submits herewith a sworn English translation of the priority document JP 2002-324967 supporting the elements of the present claims to remove Tosaki as a reference.

In view of the above, it is respectfully requested that Tosaki be removed as a reference, and that the foregoing rejection be withdrawn.

(3) Referring to paragraph 8 of the Action, claims 1-4, 6 and 7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Michio et al. (EP 0661302A1) in view of Tran et al. (US 6,103,316).

Applicants respectfully traverse the rejection.

The Examiner acknowledges that Michio does not disclose a PSA layer comprising a hydrophilic polymer. The Examiner cites Tran to make up for this deficiency. The Examiner cites Tran as disclosing "polymeric suspending agents," such as polyacrylic acid, that appear to be within the scope of the hydrophilic polymer (C) of the present claims. Further, the Examiner asserts that one of ordinary skill in the art would have found it obvious to include the polymeric suspending agents of Tran in the PSA layer of Michio to "stabilize the emulsion."

Nevertheless, the Examiner also acknowledges that Michio and Tran fail to disclose the process step of claim 1, which requires the hydrophilic polymer be added after polymerization of the acrylic polymer. The Examiner simply states that this product-by-process limitation fails to patentably distinguish the present claims. For the reasons noted above, we disagree with the Examiner. Further, the Examiner has not articulated any rationale (and the cited art provides no suggestion or motivation) as to why one of ordinary skill in the art would add the hydrophilic polymer as an aqueous solution after the polymerization of the acrylic polymer.

It is respectfully submitted that the Examiner has failed to establish a *prima facie* case of obviousness, and even if a *prima facie* case could be established, the unexpectedly superior results set forth in the record would rebut any *prima facie* case that could be established.

In paragraph 9 at pages 10-11 of the Office Action, the Examiner responds to Applicant's arguments and, among other points, criticizes the Declarations of Mr. Tosaki. We discuss the Examiner's points as follows.

The Examiner states he was not persuaded by the Declarations of Mr. Tosaki.

(a) The Examiner states that the declaration fails to accurately duplicate Example 8 of Cooprider because the molecular weight of the polyacrylic acid used in the declaration and Example 8 of Cooprider are not the same. The Examiner points out that the MW of the

polyacrylic acid of Cooprider was 190,000, while Mr. Tosaki conducted experiments using polyacrylic acids having a MW of 150,000 and 250,000.

Specifically, the Examiner is of the belief that "it is not clear if a linear interpolation of the weight% of anionic emulsifier for Example 8 of Cooprider based on Examples in the declaration that use polyacrylic acid of MW 150,000 and 250,000 is proper." The Examiner states that "with only 2 data points, one does not know whether the relationship is linear, a curve or function."

Applicants respectfully disagree. The Advisory Action dated July 20, 2007 was responded to by submitting a Rule 114 Response and the Supplemental Declaration of Mr. Tosaki. Therein, Mr. Tosaki expressly stated that the amount of sulfur atom-containing anionic emulsifier in the surface portion of the PSA layer of Example 8 would fall between 8.7 and 11.1 (for 250,000 and 150,000, respectively).

Each of these points is well outside of the recited range of from 0.1 to 3 parts by weight. Indeed, the result using the higher MW polyacrylic acid was almost three times more than the upper limit of the recited range. Nonetheless, without citing a reference or providing any technical explanation as to why, the Examiner takes the extreme position that employing a polyacrylic acid of MW 190,000 may result in an amount of sulfur atom-containing anionic emulsifier in the surface portion of the PSA layer that falls within the scope of 0.1 to 3 parts by weight.

In the Supplemental Declaration, Mr. Tosaki also pointed out that employing polyacrylic acid of 150,000 and 250,000 was within the scope of Cooprider's disclosure. Cooprider only teaches that the polyacrylic acid has a MW of 5,000 or higher. Further, Mr. Tosaki points out that in Examples 13, 14, 16 and 18-20 of Cooprider, Cooprider employs a polyacrylic acid

having a MW of 240,000, which is very similar to the 250,000 MW polyacrylic acid employed in the Declaration.

Moreover, referring to Cooprider, Mr. Tosaki states that "one of ordinary skill in the art would expect the other Examples to have an amount of sulfur atom-containing anionic emulsifier in the surface portion of the PSA layer that is similar to Example 8."

(b) The Examiner states that "the declaration also makes assumptions such as 'uniform distribution of elements' in calculation of the ration of sulfur element (see page 6 of the declaration filed 07/13/07)." The Examiner states that "it is not clear as to what extent this assumption is true."

It seems that the Examiner may misunderstand the data presented in the July Declaration of Mr. Tosaki.

In Table 1 on page 5 of the Declaration, the actual measurements of the elementary ratios (in atomic %) are shown as derived by the ESCA method. Again, Table 1 shows the actual percentage of sulfur element found in the surface portion of the PSA layers obtained by the experimentation conducted by or under the supervision of Mr. Tosaki. In Table 1, the actual percentage of sulfur atom in the surface portion was 0.5 % and 0.4 % for 150,000 and 250,000 MW polyacrylic acid, respectively.

In contrast, Tables 2-4 show what the amounts of the various elements and/or compounds would be in a hypothetical PSA layer under the assumption that the elements (compounds) are uniformly distributed throughout the entire thickness direction of the PSA layer. As discussed above on page 4, this is the same assumption the Examiner makes in support of his rejection in the first full paragraph on page 5 of the Office Action (that is, that Cooprider's disclosure regarding very little coagulum would result in "a finely dispersed PSA composition").

In Table 4, Mr. Tosaki shows that the hypothetical percentage of sulfur atom in the surface portion of PSA layer, when one assumes there is a uniform distribution in the thickness direction, would be 0.02357 % (for 150,000 MW polyacrylic acid).

Therefore, when the results of the hypothetical example assuming uniform distribution are compared to the actual results obtained by the actual experiment, it is clear that the Examiner's position that the PSA layer of Cooprider will have "a finely dispersed" composition is simply incorrect.

(c) The Examiner states that "there is no evidence on the record that the FINAL performance characteristics (i.e. bond strength) of the tapes of Cooprider and that of Applicant are any different."

Applicants respectfully disagree.

The Working and Comparative Examples of the present application, which are part of the record, demonstrate the superiority of PSA tapes or sheets within the scope of the present claims. Compare, for example, Example 2 on page 49 *with* Comparative Example 2 on the same page. As seen in Table 1 on that page, the only difference between these two examples appears to be that the amount of sulfur atom-containing anionic emulsifier in the surface portion of Comparative Example 2 is outside of the scope of the present claims. Thus, Table 1 demonstrates that the FINAL performance characteristics of Example 2 are superior to Comparative Example 2. Further, it is respectfully submitted that for the purpose of demonstrating superior results, Comparative Example 2 is a better comparison than Example 8 of Cooprider.

(d) Finally, the Examiner states that certain characteristics asserted in the declaration, such as excellent initial adhesion to the dewing surface, are not recited in the present claims.

It is respectfully submitted that it is not required under U.S. practice that shared characteristics used to demonstrate superior results be recited in the claims.

In view of the above, withdrawal of the rejection is respectfully requested.

III. Conclusion

Fro the foregoing reasons, reconsideration and allowance of claims 1-7 is respectfully requested.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

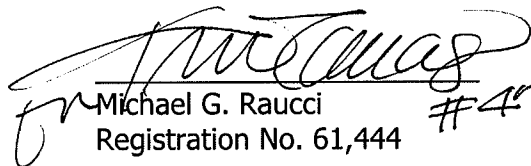
Respectfully submitted,

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